

INFORMATION DISCLOSURE CITATION
(USE SEVERAL SHEETS IF NECESSARY)

Docket Number (Optional)

99-100

Application Number

09/301,004

Applicant(s)

OED EDDIE STURMAN

Filing Date

April 27, 1999

Group Art Unit

unassigned

U. S. PATENT DOCUMENT

Examiner Initial	Ref	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
HHH	U.S.	3,209,737	10/05/1965	Omotehara et al.	123	90	06/21/1963
	U.S.	3,532,121	10/06/1970	Sturman et al.	137	625.4	01/15/1969
	U.S.	3,683,239	08/08/1972	Sturman	317	150	06/17/1971
	U. S.	3,743,898	07/03/1973	Sturman	317	154	03/27/1972
	U. S.	4,396,037	08/02/1983	Wilcox	137	625.65	05/13/1981
	U. S.	4,409,638	10/11/1983	Sturman et al.	361	152	10/14/1981
	U. S.	4,887,562	12/19/1989	Wakeman	123	90.12	09/28/1988
	U. S.	4,930,464	06/05/1990	Letsche	123	90.12	09/27/1989
	U. S.	5,003,937	04/02/1991	Matsumoto et al.	123	90.12	08/01/1989
	U. S.	5,022,358	06/11/1991	Richeson	123	90.12	07/24/1990
HHH	U. S.	5,124,598	06/23/1992	Kawamura	310	30	04/30/1990

FOREIGN PATENT DOCUMENTS

Ref	Document Number	Date	Name	Class	subclass	Filing date If appropriate

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

HHH	"Breakthrough In Digital Valves" by Sturman et al. (Sturman Industries, Inc.) reprinted from <u>Machine Design</u> pp. 37-40, 42, February 21, 1994
	SAE Paper No. 960581 "Camless Engine" by Schechter et al. (Ford Research Lab) February 26, 1996
	"Developments In Digital Valve Technology" by Rob Wilson reprint from <u>Diesel Progress North American Edition</u> pp. 76, 78-79 April 1997
HHH	SAE Paper No. 970248 "Dynamic Model of a Springless Electrohydraulic Valvetrain" by Kim et al. (U. of Illinois and Ford Research Company) 1997

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HHH	U.S.	5,170,755	12/15/1992	Kano et al.	123	90.17	03/06/1992
	U.S.	5,193,495	03/16/1993	Wood, III	123	90.12	07/16/1991
	U.S.	5,209,453	05/11/1993	Aota et al.	251	57	11/19/1990
	U. S.	5,224,683	07/06/1993	Richeson	251	30.01	03/10/1992
	U. S.	5,237,976	08/24/1993	Lawrence et al.	123	508	12/17/1992
	U. S.	5,248,123	09/28/1993	Richeson et al.	251	29	12/11/1991
	U. S.	5,255,641	10/26/1993	Schechter	123	90.11	12/21/1992
	U. S.	5,275,136	01/04/1994	Schechter et al.	123	90.12	05/07/1993
	U. S.	5,327,856	07/12/1994	Schroeder et al.	123	90.12	12/22/1992
	U. S.	5,335,633	08/09/1994	Thien	123	90.12	06/10/1993
HHH	U. S.	5,339,777	08/23/1994	Cannon	123	90.12	08/16/1993

FOREIGN PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

HHH	SAE paper no. 981029 "Adaptive Lift Control for a Camless Electrohydraulic Valvetrain" by Anderson et al. (U. of Illinois and Ford Motor Co.) February 23, 1998.
	SAE Paper No. 1999-01-0196 "Application of Digital Valve Technology to Diesel Fuel Injection" by Cole et al. (Sturman Industries, Inc.) March 1, 1999.
	SAE Paper No. 1999-01-0825 "Digital Valve Technology Applied to the Control of an Hydraulic Valve Actuator" by Misovec et al. (Sturman Industries, Inc.) March 1, 1999.
HHH	"A New Generation of Two-Stroke Engines for the Year 2000" by Duret, <u>A New Generation of Two-Stroke Engines for the Future?</u> Paris, 1993, pp. 181-194

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###	U. S.	5,367,990	11/29/1994	Schechter	123	90.12	12/27/1993
	U.S.	5,373,817	12/20/1994	Schechter et al.	123	90.12	12/17/1993
	U.S.	5,410,994	05/02/1995	Schechter	123	90.12	06/27/1994
	U.S.	5,448,973	09/12/1995	Meyer	123	90.12	11/15/1994
	U. S.	5,460,329	10/24/1995	Sturman	239	96	06/06/1994
	U. S.	5,471,959	12/05/1995	Sturman	123	447	08/31/1994
	U. S.	5,494,219	02/27/1996	Maley et al.	239	88	06/02/1994
	U. S.	5,507,316	04/16/1996	Meyer	137	625.65	09/15/1994
	U. S.	5,572,961	11/12/1996	Schechter et al.	123	90.12	04/05/1995
	U. S.	5,577,468	11/26/1996	Weber	123	90.12	11/29/1991
###	U. S.	5,598,871	02/04/1997	Sturman et al.	137	625.65	09/13/1994

FOREIGN PATENT DOCUMENTS

Ref	Document Number	Date	Name	Class	subclass	Filing date If appropriate

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

###	"Development of a New Two-Stroke Engine with Poppet-Valves: Toyota S-2 Engine" by Duret, <u>A New Generation of Two-Stroke Engines for the Future?</u> Paris, 1993, pp. 53-62.
	"Twenty Years of Piaggio Direct Injection Research to Mass Produced Solution for Small 2T SI Engines" by Nuti et al., <u>Two-Stroke Engines and Emissions</u> , SAE Publication SP-1327, 1998, pp. 65-78.
	<u>Design and Simulation of Two-Stroke Engines</u> by Blair, SAE Publications No. R-161, pp. 1-48.
###	<u>Diesel Engine Reference Book Second Edition</u> by Challen, SAE Publication No. R-183, pp. 27-71.

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Examiner Initial	Ref	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
HHH	U. S.	5,622,152	04/22/1997	Ishida	123	446	07/05/1995
	U.S.	5,628,293	05/13/1997	Gibson et al.	123	446	08/31/1995
	U.S.	5,638,781	06/17/1997	Sturman	123	90.12	05/17/1995
	U.S.	5,640,987	06/24/1997	Sturman	137	1	04/05/1994
	U. S.	5,673,669	10/07/1997	Maley et al.	123	446	06/12/1995
	U. S.	5,700,136	12/23/1997	Sturman	417	270	07/23/1996
	U. S.	5,713,316	02/03/1998	Sturman	123	90.12	02/27/1997
	U. S.	5,720,261	02/24/1998	Sturman et al.	123	446	12/01/1994
	U. S.	5,813,841	09/29/1998	Sturman	417	446	05/16/1996
HHH	U. S.	5,829,396	11/03/1998	Sturman	123	90.12	07/16/1996

FOREIGN PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

HHH		"Characteristics of Scavenging Flow in A Poppet-Valve Type 2-Stroke Diesel Engine by Using RSSV System", <u>Progress in Two-Stroke Engine and Emissions Control</u> , SAE Publication SP-1131, 1998, pp. 93-101.
		"NOx Control in Heavy-Duty Diesel Engines - What is the Limit?" <u>In-Cylinder Particulate and NOx Control</u> , SAE Publication No. SP-1326, 1998, pp. 9-20.
		"Stratified Diesel Fuel-Water-Diesel Fuel Injection Combined with EGR-The Most Efficient In-Cylinder NOx and PM Reduction Technology", <u>Combustion and Emissions in Diesel Engines</u> , SAE Publication No. SP-1299, 1997, pp. 39-44.
HHH		<u>Vehicle and Engine Technology Second Edition</u> by Heisler, SAE International, London, 1999, pp. 292-308.

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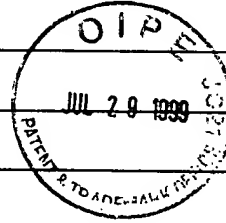
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Group Art Unit

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U. S. PATENT DOCUMENT

Examiner Initial	Ref	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate



FOREIGN PATENT DOCUMENTS

Ref	Document Number	Date	Name	Class	subclass	Filing date If appropriate

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

HHH	U. S. Appln. No. 08/712,208 filed 07/21/1998 HYDRAULICALLY CONTROLLED CAMLESS VALVE SYSTEM FOR AN INTERNAL COMBUSTION ENGINE (Sturman)
I	U. S. Appln. No. 08/799,296 filed 02/13/1997 A CONTROL MODULE FOR CONTROLLING HYDRAULICALLY ACTUATED INTAKE/EXHAUST VALVES AND A FUEL INJECTOR (Sturman)
I	U. S. Appln. No. 08/899,801 filed 07/24/1997 HYDRAULIC ACTUATOR FOR AN INTERNAL COMBUSTION ENGINE (Sturman)
HHH	U. S. Appln. No. 09/026,627 filed 02/20/1998 PULSED-ENERGY CONTROLLERS AND METHODS OF OPERATION THEREOF (North)

EXAMINER

HA1 HUYNH

DATE CONSIDERED

11/12/00

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April 27, 1999

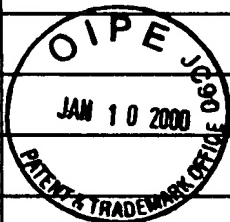
Group Art Unit

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U.S. PATENT DOCUMENTS

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*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
H H H	U. S.	5,954,030	09/21/1999	Sturman et al.	123	446	11/30/1995
I	U. S.	5,960,753	10/05/1999	Sturman	123	90.12	07/24/1997
H H H	U. S.	5,970,956	10/26/1999	Sturman	123	508	02/13/1997



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FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

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DOCKET NUMBER (OPTIONAL)

99-1

APPLICATION NUMBER

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APPLICANT(S)

Oded Eddie Sturman et al.

FILING DATE

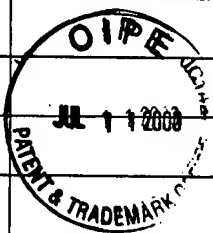
April 27, 1999

GROUP ART UNIT

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U. S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
HHH	U. S.	6,005,763	12/21/1999	North	361	154	02/20/1998
HHH	U. S.	6,012,644	01/11/2000	Sturman et al.	239	96	04/15/1997



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FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

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